

REMARKS

The Office Action dated November 18, 2009 and cited references have been carefully reviewed. In the Office Action, claims 1-14 and 16-22 were pending and rejected. Reconsideration and indication of the allowability of claims 1-14 and 16-22 in view the following remarks are respectfully solicited.

The Applicant thanks the Examiner for taking time to discuss the present application with the undersigned Applicant's attorney during the telephone interview on November 30, 2009. During the interview, the undersigned attorney pointed out that the claimed recovery chamber is not a particle classifier that separates coarse particles from fine particles, but rather, it separates the fine particles from air. The undersigned attorney further explained that neither Weit or Hanke teaches such a recovery chamber for separating fine particles from air, or a method of using a vortex created by the rotary cage to separate fine particles from air. In Weit or Hanke, the fine particles exit the systems mixed with air, thus both systems require a separate dust separator for separating fine particles from air. After the discussion, the Examiner indicated that he now understands the claimed recovery chamber and agreed that Weit nor Hanke discloses the recovery chamber that separates fine particles from air. Further, the Examiner asked that the Applicant prepare a Response to Office Action including a summary of what was discussed in the interview for reconsideration of the pending claims. Therefore, the Applicant submits this Response to Office Action, and respectfully requests the Examiner to reconsider claims 1-14 and 16-22 and indicate the allowability thereof.

The Examiner rejected claims 1-14 and 16-22¹ under 35 U.S.C. § 103(a) as being unpatentable over Weit (US 5,232,096) in view of Hanke (US 4,869,786). The Applicant has carefully reviewed the cited references and the Examiner's application thereof, but must respectfully traverse this ground of rejection.

When determining whether a claim is obvious, an examiner must make "a searching comparison of the claimed invention - **including all its limitations** - with the teaching of the prior art." *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (Emphasis added); *see also Beckson Marine, Inc. v. NFM, Inc.*, 292 F.3d 718, 727 (Fed. Cir. 2002) (holding that for claimed subject matter to be obvious either the prior art references must expressly teach each

¹ The Examiner erroneously stated claims 1-14 and 16-18 were rejected under 35 U.S.C. § 103(a). The Applicant assumes this was a typographical error since the Examiner stated "[r]eferring to claims 1-14 and 16-22" in the following paragraph at page 2.

claim limitation exactly or else the record must disclose a reason for a person of ordinary skill in the art to modify the prior art teachings to obtain the claimed invention). In this case, Weit, alone or combined with Hanke, fails to teach or suggest all limitations of independent claims 1, 14 and 20, as discussed in detail below.

Independent claim 1 recites, *inter alia*, "the recovery chamber (2) adapted to use the vortex created by the rotary cage for cycloning the fine particles mixed with air and separating the fine particles from air; and said recovery chamber (2) including a fine particles outlet and an air outlet, wherein the fine particles separated from air exit through the fine particles outlet and a dedusted air exits through the air outlet." Similarly, independent claim 20 recites, *inter alia*, "wherein the recovery chamber . . . uses the vortex created by the rotary cage to cyclone and separate fine particles from air; wherein the recovery chamber includes a fine particle outlet and an air outlet, the fine particle outlet coaxially arranged with the air outlet, wherein the fine particle outlet circumscribes the outer periphery of the air outlet, wherein the fine particles separated from air is recovered through the fine particle outlet and a dedusted air exit through the air outlet." Further, independent claim 14 recites, *inter alia*, "using the vortex created by the rotary cage and possibly further accelerated by mobile or fixed deflectors (4) for cycloning the fine material; and separating the dedusted air and the fine particles and extraction of the latter to a means of conveyance." However, Weit nor Hanke teaches a recovery chamber that separates fines from air, or a method of using the vortex created by the rotary cage and separating the dedusted air and fine particles.

In rejecting claims 1-14 and 16-22, the Examiner admitted that "Weit does not disclose separating fine particles from air or disclose wherein the recovery chamber comprises a fine particles outlet and an air outlet and wherein dedusted air exits through the air outlet." Office Action dated November 18, 2009, at page 3. The Examiner then relied on Hanke to cure these deficiencies of Weit. The Applicant first notes that the Examiner admitted in the previous Office Action that "Hanke does not disclose wherein the recovery chamber is adapted to use the vortex created by the rotary cage for cycloning said material or wherein the recovery chamber separates fine particles from air." Office Action dated May 15, 2009.

Contradicting his own explicit admission, the Examiner stated that "Hanke discloses the classifier comprising . . . a particles outlet (20) and an air outlet (23), wherein the particles separated from air exit through the particles outlet and dedusted air exits through the air

outlet." Office Action dated November 18, 2009, at page 3. However, Hanke does not teach a recovery chamber that separates fines from air or the outlet for fine particles separated from air or the outlet for dedusted air. Specifically, Hanke states in column 6, lines 23-37:

A reclassification of the coarse material takes place in classifying chamber 15 . . . The **coarse material** freed from undesired fines **falls** out of the classifying chamber 15 **into the coarse material hopper 20** . . . The mixed air from air ducts 18, 18', 19, 19', flows with the desired, residual fines through impact ledges 21 of the second centrifuge basket 14. These residual fines are sucked together with the mixed air by means of a collecting container 22 connected to the lower open end face 32 of centrifuge basket 14. In the present case, suction takes place by means of **two air outlets 23 laterally connected to collecting vessel 22 which supply the fine-laden classifying air to further dust separators.** (Emphasis added.)

As quoted, the coarse material hopper 20 is not a particle outlet wherein the fine particles separated from air exit. Rather, the coarse material hopper 20 is an outlet for the coarse material that was separated from the fines. In other words, the classifying chamber 15, which is a part of the second classifying stage 2 that was called out by the Examiner as the equivalent structure to the claimed recovery chamber, does not separate fine particles from air, but separates coarse particles from fine particles. Further, air outlets 23 are not air outlets wherein the dedusted air separated from fines exit. Rather, fine particles mixed with air (the fine-laden classifying air) exit through the air outlet to separate dust separators. That is, the separation of fines from air is not performed in the second classifying stage 2, but in separate and independent separators. Therefore, the Applicant respectfully submits that Weit alone or combined with Hanke fails to teach or suggest a recovery chamber that separates the fine particles from air as claimed in claims 1 and 20 or a method of using vortex created by the rotary cage and separating the fine particles from air as claimed in claim 14. Reconsideration and indication of the allowability of claim 1 and its dependent claims 2-13 and 16-19; claim 20 and its dependent claims 21 and 22; and claim 14, in view of the foregoing remarks are respectfully solicited.

Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

In re Appln. Of: Xavier Prignon
Application No.: 10/586,236

Extension of Time and Fee Deficiency

The Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that the Applicant has inadvertently overlooked the need for a petition and fee for extension of time. If any additional fee is required, or any overpayment is made, in connection with this communication please charge or credit deposit account No. 50-3505.

Respectfully submitted,

/Sun Y. Pae/

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